

## **Section I - Introduction**

### **A. STATEMENT OF THE PROBLEM**

Although it is not possible to prevent natural hazards from occurring, it is possible to reduce or eliminate the loss of life and property damage resulting from these hazards. According to the Federal Emergency Management Association (FEMA), the occurrence of natural hazards and resulting disasters in the previous decade has caused emergency managers on federal, state, and local levels to revise their approach to disaster response and recovery. The approach was shifted from a disaster-response driven system to a system based on pre-disaster or ongoing risk analysis to allow for proactive rather than reactive response to hazard events. In an effort to prepare for these events before they occur and respond to them more effectively after they occur, the Town of Knightdale completed its first Hazard Mitigation Plan in 2004.

Mitigation is the cornerstone of emergency management. FEMA defines hazard mitigation as “any sustained action taken to reduce long-term risk to human life and property from natural hazards.” Mitigation strategies include prevention, property protection, natural resource protection, structural projects, and public information.

This Plan has been updated in accordance with Keeping Natural Hazards from Becoming Disasters – A Mitigation Planning Guidebook for Local Governments. This guidebook, written by The North Carolina Division of Emergency Management (NCEM), Hazard Mitigation Section, Risk Assessment and Planning Branch, outlines the steps necessary to prepare a Hazard Mitigation Plan to satisfy requirements of the Disaster Mitigation Act of 2000. The organization of this report follows the outline given in the guidebook.

In updating this plan, the following natural hazards were analyzed: Dam/Levee Failure, Drought/Heat Wave, Earthquakes, Flooding, Hurricanes/Coastal Storms, Landslides/Debris Flow, Tornadoes/Severe Thunderstorms, Wildfires, and Severe Winter Weather. The hazards have been reevaluated and ranked according to the potential damage they could cause within the Town of Knightdale, and hazards whose impacts could potentially be reduced by mitigation were identified. Of the nine (9) hazards addressed, mitigation strategies have been revised or developed for the following: flooding; hurricanes/coastal storms;



tornadoes/severe thunderstorms; drought/heat waves; and severe winter storms. A complete identification and analysis of the hazards can be found in Appendix A.

The continued vulnerability of the Town to natural hazards was assessed for both existing conditions and projected future conditions in accordance with current development regulations. Specifically, the number of people and amount of property that could be impacted by flooding, hurricanes/coastal storms, tornadoes/severe thunderstorms, and severe winter storms were estimated. The vulnerability assessment can be found in Appendix B.

The capacity of the Town to deal with natural hazards was also assessed. This included an evaluation of existing policies, practices, programs, regulations, and ordinances that affect the vulnerability to hazards as well as the Town's current technical capability, fiscal capability and political climate. The capability assessment can be found in Appendix C.

The completion and reevaluation of the background analyses of hazard identification, vulnerability assessment, and capability assessment continues to lead the Advisory Committee to the conclusion that the Town of Knightdale is susceptible to natural hazards whose impacts can be reduced or eliminated through the existence of an updated Hazard Mitigation Plan. Specifically, the impacts of flooding, hurricanes/coastal storms, tornadoes/severe thunderstorms, drought/heat waves and severe winter storms are addressed in the Plan. The mitigation values and goals can be found in Section II. The mitigation strategies associated with these goals are discussed in Section III.

## **B. PURPOSE OF THE PLAN**

The Town of Knightdale has prepared this updated Hazard Mitigation Plan in order to continue to be eligible to receive State and Federal assistance funding. Local governments must have an approved Hazard Mitigation Plan that meets the requirements of the Disaster Mitigation Act of 2000 (DMA2K) in order to receive federal mitigation assistance. The Town of Knightdale applied for and was accepted into the Hazard Mitigation Grant Program (HMGP). A requirement of the program is that all local governments who receive funding must prepare and adopt a state-approved local mitigation plan.



In addition to meeting various State and Federal requirements, the Plan has other purposes. They are as follows:

1. Save lives and property
2. Identify and reduce potential impacts of natural hazards
3. Save money over time
4. Facilitate state and federal funding following disasters
5. Facilitate recovery following disasters
6. Educate residents about natural hazards and their potential impacts
7. Show that the Town is committed to improving the health and safety of its residents

### **C. PARTICIPANTS IN THE PLANNING PROCESS**

The participants in the continued planning process included an Advisory Committee, the Mayor of the Town of Knightdale, the Town Council, the Town's Land Use Review Board and the public. The public was given an opportunity to have input in the plan through public meetings at Town Hall that were advertised in the Eastern Wake Times, the newspaper that serves the Town. By issuing invitations, the Town invited representatives of academia, nonprofit interest groups, business, and neighboring communities to participate in its planning process.

The Advisory Committee continues to oversee the preparation of the Plan and the updates to it. The Committee is comprised of local Town officials representing administration, planning, building and inspections, parks and recreation, engineering, public works, public utilities and public safety. The Committee has regrouped and is conducting meetings on a regular basis to update the Plan and is committed to monitoring progress on the Plan at least once per year. A list of the members of the Advisory Committee along with their function in preparing the Plan appears below.



**Table I-1 - Members of Advisory Committee**

<b>Name</b>	<b>Agency</b>	<b>Position</b>	<b>Function</b>
Chris Hills	Town of Knightdale Planning Department	Planner II & Interim Planning Director	Plan oversight and Community Development
Jeff Triezenberg	Town of Knightdale Planning Department	Planner II	Plan oversight
Tim Guffey	Town of Knightdale Public Safety Department	Fire Division Commander	Emergency Management
Tracy Pedigo	Town of Knightdale Public Works Department	Public Works Director	Public Works
Cesar Sanchez	City of Raleigh Public Utilities Department	Engineer	Public Utilities (Water and Sewer)
Tina Cheek	Town of Knightdale Parks and Recreation Department	Parks and Recreation Director	Public Facilities Management
Seth Lawless	Town of Knightdale Administration	Assistant Town Manager	Emergency Management
Fred Boone	Town of Knightdale Engineering Department	Engineering Department Director	Engineering
Scott Wells	Town of Knightdale Engineering Department	Construction Inspector	Inspections
Mike Chalk	Town of Knightdale Town Council	Mayor-Pro-Tem	Plan oversight
Terry Gleason	Town of Knightdale Town Council	Councilor	Plan oversight

The background analyses, including the hazard identification and analysis, vulnerability assessment, and community capability assessment were re-assessed by the Advisory Committee with input from the public. Mitigation values and goals were re-assessed by the Advisory Committee and reformulated as found necessary. An overview of the update process along with the Plan's values and goals were presented at the first public meeting which was held prior to a regular



meeting of the Town's Land Use Review Board at 6:00pm on Monday, November 10, 2008. The public was encouraged to attend through an advertisement in the Eastern Wake News on November 5, 2008, a notice included in the Town's weekly e-Views electronic newsletter, and an invitation run in rotation on the area's public access television station – East Wake TV. The meeting's notice of advertisement, sign-in sheet, TV slide, e-Views notice, PowerPoint® presentation and copies of completed vulnerability assessment worksheets can be found in Appendix D.

A draft of the updated Plan was written by the Town's Planning Department staff with input from the Advisory Committee. Upon completion, the draft was presented to the Town Council at its January 21, 2009 meeting. The Mayor and other council members were given the opportunity to comment on the updated Plan.

After review by NCEM staff, the updated Hazard Mitigation Plan was ready to be adopted by the Town before submittal to FEMA for review and approval. The second required public meeting was held at the time of adoption of the plan. This meeting is described in the Adoption portion of this section.

#### **D. DESCRIPTION OF THE PLANNING PROCESS**

The Plan was prepared in accordance with Keeping Natural Hazards from Becoming Disasters - A Mitigation Planning Guidebook for Local Governments. This guidebook, written by The North Carolina Division of Emergency Management, Hazard Mitigation Section, Risk Assessment and Planning Branch, outlined the steps necessary to prepare a Hazard Mitigation Plan to satisfy requirements of the Disaster Mitigation Act of 2000.

An Advisory Committee was re-formed to oversee the planning process as none of the original members were employed or under contract with the Town. Meetings with the Advisory Committee, NCEM staff, and the public were conducted during the planning process. A description of these meetings follows:



**Table I-2 - Planning Meetings**

<b>Date</b>	<b>Meeting Purpose/Topic</b>	<b>Participants</b>
July 17, 2008	Hazard Mitigation Update Training, Part 1 – Burlington, NC	Town Planning Department Staff and NCEM Staff
August 8, 2008	Kickoff Meeting	Advisory Committee
September 5, 2008	Evaluate Strategies, Update Mitigation Actions, Re-assess Town's vulnerability and capability	Advisory Committee
October 29, 2008	Hazard Mitigation Update Training, Part 2 – Burlington, NC	Town Planning Department Staff and NCEM Staff
November 10, 2008	Public Meeting, Describe Plan Update Process, Assess public's perception of current hazard vulnerability	Town Planning Department Staff and Public
November 25, 2008	Update Mitigation Action Table, Assign Specific Update Tasks	Advisory Committee
January 21, 2009	Town Council Meeting Present Draft of Plan	Town Council and Planning Department Staff

The steps taken to update the plan are as follows:

1. Identify the hazards – This first step in developing the mitigation plan involves identifying and analyzing the hazards facing the Town of Knightdale. According to FEMA and NCEM requirements, nine (9) hazards were identified and addressed by the Plan. For each hazard the likelihood of occurrence, intensity, and level of impact analyzed. The Hazard Identification is found in Appendix A.
2. Assess hazard vulnerability – Once the hazards that could potentially have an impact on the town were identified, the Town assessed its vulnerability to each hazard. This step predicted the number of people and amount of property that could be impacted by the hazards identified in the previous step. The Town's vulnerability was predicted for both existing conditions and projected future conditions in accordance with current development



regulations. This step also included mapping the hazards and showing how community features such as critical facilities, existing development, projected future development, and infrastructure could be impacted by the hazards. The Vulnerability Assessment is found in Appendix B.

3. Assess community capability – An evaluation was conducted to identify how well existing Town policies and programs mitigate hazards. The assessment included an evaluation of existing policies, practices, programs, regulations, and ordinances that affect the vulnerability to hazards. Additionally, the Town’s legal and fiscal capability as well as political climate were assessed. The Capability Assessment is found in Appendix C.
4. Form interim conclusions – This step, also called the acceptability assessment, involves the determination of whether preparation of a Hazard Mitigation Plan is warranted.
5. Establish values and goals – Establishing goals and values is an integral part of any plan. After identifying potential hazards, vulnerability to those hazards, and the current effectiveness of the Town to mitigate damages resulting from them, the Town was able to formulate the values and goals of the Hazard Mitigation Plan. This includes the identification of existing community goals that support the mitigation of natural hazards and the formulation of new goals specific to vulnerability and mitigation issues. The Mitigation Goals and Values are found in Section II of the Plan.
6. Formulate mitigation policies and strategies – The mitigation policies and strategies describe how the mitigation goals will be met. It includes identification, evaluation, and analysis of mitigation actions to reduce the effects of each hazard addressed by the Plan. The Mitigation Strategies and Policies as well as the implementation process for each of the policies are found in Section III of the Plan.
7. Establish procedures for monitoring, evaluating, and reporting progress – In order for any plan to be successful, it must continuously be reviewed to ensure that policies are revised and updated as community conditions change. Section IV, Monitoring, Evaluating and Reporting Progress



outlines how the Town of Knightdale will establish a regular schedule for reviewing and assessing the Plan's effectiveness.

8. Establish procedures for revisions and updates – The Town of Knightdale expects tremendous growth and development over the next several decades. These dynamic changes require that processes for revising and updating the plan are established and incorporated into the Plan. This step identifies the person responsible for reviewing the monitoring reports and making revisions and updates to the Plan as needed. It also specifies that any updates to the plan will require submittal to state and federal review agencies. Revision and Update procedures are found in Section V.
9. Adoption – Formal adoption of the Hazard Mitigation Plan is necessary in order to make it an enforceable policy. A description of the process that was used for formal adoption of the Plan appears below.

## **E. ADOPTION**

In order to become an enforceable policy, the updated Hazard Mitigation Plan must be formally adopted by the Town. According to the existing FEMA guidelines, adoption is required before the Plan is submitted to FEMA for review and approval.

Following review of the Hazard Mitigation Plan by NCEM staff, the Advisory Committee recommended that the Town Council adopt the plan. A Public Hearing was held in conjunction with a Town Council meeting on August 19, 2009 to allow for public comment and officially adopt the plan. This was the second public meeting held during the planning process to allow Town residents and other interested parties to contribute to the plan.

A copy of **RES# 09-08-19-002 Resolution for the Adoption of the 2009 Update to the Town of Knightdale Hazard Mitigation Plan**, signed by Mayor Russell M. Killen on August 19, 2009 appears on the following page.

